UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,840	03/30/2004	Gen Sasaki	251146US2	2321

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EXAMINER
CUTLER, ALBERT H

ART UNIT	PAPER NUMBER
2622	

NOTIFICATION DATE	DELIVERY MODE
05/13/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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	Application No.	Applicant(s)
Office Action Summary	10/811,840	SASAKI, GEN
	Examiner	Art Unit	
	ALBERT H. CUTLER	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _04 April 2008_.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1,2,13-16 and 18_ is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _1,2,13-16 and 18_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
       1.☐ Certified copies of the priority documents have been received.
       2.☐ Certified copies of the priority documents have been received in Application No. _____.
       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

1.		This office action is responsive to communication filed on April 4, 2008.

Continued Examination Under 37 CFR 1.114

2.		A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on

February 22, 2008 has been entered.

Response to Arguments

3.		Applicant's arguments with respect to claims 1 and 15 have been considered but

are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

4.		The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.		The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

	1.		Determining the scope and contents of the prior art.
	2.		Ascertaining the differences between the prior art and the claims at issue.
	3.		Resolving the level of ordinary skill in the pertinent art.

      4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

6.   Claims 1, 2, 13-16 and 18 rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson (US 6,847,388) in view of Roberts et al. (US 6,233,010).

Consider claim 1, Anderson teaches:

An image processing apparatus for performing image processing on captured data of an image of a desired subject (see figures 3 and 7), comprising:

an image processing part (612, 614 and 536, figure 7) including:

a buffer memory (536, figure 7, figure 4B) for data storage (The buffer memory (536) stores frames of image data, column 5, lines 64-65.);

an image processing unit (612) for performing a predetermined process on said captured data to obtain image data (column 6, lines 19-28), and writing said image data to said buffer memory (536, column 6, lines 28-29);

and a compression unit (614) for compressing said image data read from said buffer memory (536, column 9, lines 28-40), wherein

said buffer memory (536) is connected to receive only said image data from said image processing unit (See figure 4B, column 6, lines 4-14. Images are read from input buffer 538, processed, and transferred to frame buffer 536.); and

a storage unit (removable memory, 354) provided outside said image processing part (See figures 3 and 7. The CPU(344) performs the image processing, column 6, lines 12-14.).

However, Anderson does not explicitly teach that the buffer memory is connected to output said image data only to said compression unit.

Roberts et al. similarly teaches an image processing apparatus (figure 2) with a buffer memory (frame buffer, 11) and a compression unit (compression processor, 12). Like Anderson, the buffer of Roberts et al. is also a frame buffer (11, figure 2).

However, in addition to the teachings of Anderson, Roberts et al. teaches that the buffer memory (11) is connected to output said image data only to said compression unit (12). This is shown in figure 2, and detailed in column 4, lines 42-61. Specifically, Roberts et al. states that, "upon completion of image conversion, the contents of the frame buffer are transferred to the compression processor."

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention to have the buffer memory taught by Anderson connected to output said image data only to the compression unit as taught by Roberts et al. for the benefit of providing a camera which is efficient in design and can provide digital image files for immediate and direct incorporation into word processing, desktop publishing, and other software programs on PC's (Roberts et al., column 2, lines 17-21 and lines 59-60).

Consider claim 2, and as applied to claim 1 above, Anderson further teaches:

wherein said buffer memory (536, figure 4B) includes a first buffer memory ("Frame Buffer A") and a second buffer memory ("Frame Buffer B"), said image processing apparatus (figures 3 and 7) further comprising:

a control unit (CPU, 344) being operative in such a manner that while said image

processing unit writes said image data either to said first buffer memory ("Frame Buffer

A") or to said second buffer memory ("Frame Buffer B"), said compression unit (614)

selectively reads image data previously stored either in said first buffer memory or in

said second buffer memory experiencing no writing of said image data by said image

processing unit (Buffer 536 is a ping-pong buffer(column 5, line 65 through column 6,

line 3). A characteristic of a ping-pong buffer is that while a first buffer memory is being

written to, a second buffer memory is being read out, and vice versa. See column 6,

lines 47-56. Column 9, lines 28-30 detail the readout from the ping-pong frame buffer

by the compression engine.).

Consider claim 13, and as applied to claim 1 above, Anderson further teaches:

a first switching unit connected between said image processing unit and said

buffer memory (536, figure 4B, column 6, lines 47-56) and a second switching unit

connected between said compression unit and said buffer memory (See column 9, lines

28-30. Buffer 536 is a ping-pong buffer (column 5, line 65 through column 6, line 3). A

characteristic of a ping-pong buffer is that while a first buffer memory is being written to,

a second buffer memory is being read out, and vice versa. See column 6, lines 47-56.

This would require a switching unit on both the input and the output.).

Consider claim 14, and as applied to claim 13 above, Anderson further teaches that said buffer memory (536) comprises first and second buffer memories ("Frame Buffer A" and "Frame Buffer B") connected in parallel (see figure 4B).

Consider claim 15, Anderson teaches:

An image processing apparatus for performing image processing on captured data of an image of a desired subject (see figures 3 and 7), comprising:

an image processing part (612, 614, 622 and 536, figure 7), including:

first and second buffer memories ("Frame Buffer A" and "Frame Buffer B") connected in parallel (see figure 4B) for data storage (The buffer memories store frames of image data, column 5, lines 64-65.);

an image processing unit (612) for performing a predetermined process on said captured data to obtain image data (column 6, lines 19-28), and alternatingly writing said image data to said first and second buffer memories (column 6, lines 47-56); and

a compression unit (614) for compressing said image data (column 9, lines 28-40) alternatingly read from said first and second buffer memories (Buffer 536 is a ping-pong buffer (column 5, line 65 through column 6, line 3). A characteristic of a ping-pong buffer is that while a first buffer memory is being written to, a second buffer memory is being read out, and vice versa (i.e. in an alternating fashion). See column 6, lines 47-56. Column 9, lines 28-30 detail the readout from the ping-pong frame buffer by the compression engine (614). The processed image data is aternatingly read from the

frame buffer (536) and displayed, column 6, lines 47-56. This same data is compressed

into screennail images, column 9, lines 17-26.).

wherein said first and second buffer memories (536) are connected to receive

only said image data from said image processing unit (See figure 4B, column 6, lines 4-

14. Images are read from input buffer 538, processed, and transferred to frame buffer

536.).

However, Anderson does not explicitly teach that the first and second buffer

memories are connected to output said image data only to said compression unit.

Roberts et al. similarly teaches an image processing apparatus (figure 2) with a

buffer memory (frame buffer, 11) and a compression unit (compression processor, 12).

Like Anderson, the buffer of Roberts et al. is also a frame buffer (11, figure 2).

However, in addition to the teachings of Anderson, Roberts et al. teaches that the

buffer memory (11) is connected to output said image data only to said compression

unit (12). This is shown in figure 2, and detailed in column 4, lines 42-61. Specifically,

Roberts et al. states that, "upon completion of image conversion, the contents of the

frame buffer are transferred to the compression processor."

Therefore, it would have been obvious to a person having ordinary skill in the art

at the time of the invention to have the first and second buffer memories taught by

Anderson connected to output said image data only to the compression unit as taught

by Roberts et al. for the benefit of providing a camera which is efficient in design and

can provide digital image files for immediate and direct incorporation into word

processing, desktop publishing, and other software programs on PC's (Roberts et al., column 2, lines 17-21 and lines 59-60).

Consider claim 16, and as applied to claim 15 above, Anderson further teaches:

a first switching unit connected between said image processing unit and said first and second buffer memories (536, figure 4B, column 6, lines 47-56) and a second switching unit connected between said compression unit and said first and second buffer memories (See column 9, lines 28-30. Buffer 536 is a ping-pong buffer (column 5, line 65 through column 6, line 3). A characteristic of a ping-pong buffer is that while a first buffer memory is being written to, a second buffer memory is being read out, and vice versa. See column 6, lines 47-56. This would require a switching unit on both the input and the output.).

Consider claim 18, and as applied to claim 15 above, Anderson further teaches a storage unit (removable memory, 354) externally connected to said image processing part (622, figure 7, column 10, lines 25-35).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALBERT H. CUTLER whose telephone number is (571)270-1460. The examiner can normally be reached on Mon-Thu (9:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan V Ho can be reached on (571)-272-7365. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AC

/Tuan V Ho/

Primary Examiner, Art Unit 2622